

receiving from a user financial plan information, comprising a predetermined initial value of an investment, at least one predetermined contribution amount at a predetermined contribution time, at least one predetermined withdrawal amount at a predetermined withdrawal time subsequent to the predetermined contribution time, and a plan duration;

selecting a first historical commencement date for a simulation of performance of a financial plan consistent with said financial plan information;

using historical financial market data commencing from said first historical commencement date, calculating the changes in said predetermined initial value of an investment for each time period in one or more series of successive historical time periods, said step of calculating including allowing for said predetermined contribution amount and said predetermined withdrawal amount, continuing until an expiration of the plan duration; and

selecting a plurality of second historical commencement dates and repeating the foregoing steps of calculation commencing with each of said second historical commencement dates.

### REMARKS

Claims 1 – 21 are pending. All claims stand rejected. Claims 1, 7 and 13 have been amended more particularly to point out and more distinctly to claim the subject matter which applicant regards as the invention. In particular, the process of iteratively updating an asset value in a financial plan through a series of successive time periods, based on historical market data, and then repeating that process with a different starting point, is more particularly pointed out. The method is explained in the specification and drawings, and no new matter is added.

Claims 1 – 19 and 20 stand rejected under 35 USC 102 (b) as being anticipated by *College Accounting, Seventh Edition*.

Claims 1 – 21 stand rejected as being unpatentable under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,021,397 (Jones).

The rejections are respectfully traversed.

The method of claim 1, as amended, is fundamentally different from that of *College Accounting*. Claim 1 is directed to a method of calculating the value of an investment using successive time periods employing historical financial market data. The reference provides an example of calculating partnership income. The method in the reference does not employ historical market data. Rather, it relates to data concerning a single enterprise. Moreover, there are no references to predetermined contributions at predetermined contribution times. The Examiner points to page 651, lines 1-5 and lines 31 – 36 as illustrating predetermined contributions at predetermined times. Lines 1 – 5 of page 651 explain adding the two figures in a ratio of 2 to 3 to obtain 5. Lines 31 – 36 are a chart which relates to dividing net income between two partners. There is no predetermined contribution by the partners here, or a predetermined contribution time. Furthermore, there are no predetermined withdrawals from an investment. Rather, as explained on page 648, the predetermined draw is charged to the partner's draw account, and is not a withdrawal from an investment account.

Furthermore, the method set forth in *College Accounting* does not recite anything resembling the use of the same initial assumptions with a different starting point.

For the foregoing reasons, all of the pending claims are allowable over *College Accounting*.

The method of Jones is a fundamentally different method from that of the invention. The method of the invention, as recited, for example, in claim 1, starts with an assumed asset allocation and values, and assumed future contributions or withdrawals, and *directly* applies to those assumptions results from *actual historical returns*. Thus, the investor can learn how a financial plan would have performed in the past. By contrast, Jones uses a *simulation* of future returns based on an econometric model. The method of Jones does not simulate the performance of a financial plan against real historical returns. Jones uses historical performance only to create a model employed in the simulation, not directly against values in a financial plan.

The Examiner has stated that Applicant argues that Jones looks only to the future, and states that Jones inherently makes use of such historical data for determining asset performance (Office Action, page 7).

Applicant does not agree that Jones inherently uses historical data to simulate the performance of a financial plan in the past. Jones simply does not make use of historical data in the direct manner claimed by Applicant. The calculation of returns in various asset classes is explained in col. 12, line 54, through col. 13, line 27. None of the techniques disclosed there involve the use of true historical data. Rather, various techniques are disclosed for creating models of returns on various asset classes.

Jones uses historical performance of individual securities to calculate a factor model. A factor model is used to simulate the future performance of individual securities or funds by modeling those funds as having exposures by various types of investments. In Jones, historical returns of the actual investments are used only to calculate the assumptive statistics to be used for specific securities. As explained at col. 15, lines 57 to 67, the financial product exposure determination module 315 computes the factor asset class exposures for a particular fund via nonlinear estimation procedures. This procedure is designed to map assets onto a factor model. The historical data used is only from a single period, and is not used to simulate the performance of a financial plan. The result of this mapping is used in connection with return scenarios generated by factor module 310. These scenarios are used for the simulation of portfolio returns (col. 8, lines 50 – 55). Factor module 310 in turn is based on core asset scenarios generated by pricing module 305. Pricing module 305 is an equilibrium econometric model for forecasting prices and returns for a set of core asset classes. Thus, Jones engages in an attempt, using various statistical methods, to predict future returns, where the present invention uses historical data.

The Examiner states that it would have been obvious to one of ordinary skill in the art at the time of the invention to have used additional and different historical data because this would have produced more accurate investment values in an iterative process of stepwise refined calculations. The Examiner states that the need for such flexibility is clearly suggested in the

disclosure of a dynamic approach to rebalancing to maximize returns at column 18, lines 27 – 48. The Examiner takes the position that the Applicant failed to address this line of argument. The Applicant did address this line of argument, by pointing out that Jones does not simulate the progress of a portfolio through historical data at all, let alone through multiple periods of historical data.

The Examiner indicates that Jones discloses, after one of the calculations, adjusting the investment based on at least one of a contribution amount and a withdrawal amount, at column 7, line 45, to column 18, line 48. In the method of Jones, this information is used in the portfolio optimization module 340. Rather than providing a result of following the plan in more than one historical period, including consideration of contributions and withdrawals, the method of Jones uses contribution and withdrawal information only in the optimization equation, Equation #7. This equation depends on the existence of a value of the user's risk tolerance in the abstract. The method of the invention requires no such assessment. Indeed, risk tolerance can only be realistically determined against a defined benefit to be achieved.

For these reasons, it is respectfully submitted that claim 1, as amended, is allowable over the prior art of record.

Claims 7 and 13, as amended, are similar to claim 1, and are allowable for the reasons that claim 1 is allowable.

Claims 2, 8 and 14 are allowable for the reasons that claim 1 is allowable.

Claims 3, 9 and 14 recite the use of different historical data for different asset categories. The method of Jones does not use historical data directly to simulate performance of different assets in a portfolio. As noted above, future results are predicted based on calculated models, not on historical data. Historical data is used only indirectly in the financial product exposure module 315. For these reasons, as well as the reasons set forth above in connection with claim 1, claims 3, 9 and 14 are allowable over the prior art of record.

Claims 5, 11 and 17 are dependent claims reciting an adjustment to investment value to simulate tax effects. In Jones, the tax adjustment module adjusts the returns for taxes. The method of the invention may be used to calculate gross returns, and can therefore accommodate

variables such as offsets of classes with losses against classes with gains, and carry forward losses. For these reasons, as well as the reasons set forth above in connection with claim 1, claims 5, 11 and 17 are allowable over the prior art of record.

Claims 6, 12 and 18 are allowable for the reasons that claim 1 is allowable.

Claim 19 relates to identification of historical intervals against which a financial plan is tested. Jones does not disclose historical time intervals, as Jones does not test a financial plan against historical market performance. This feature may permit the user to note that unacceptable results were obtained only when early years of the plan covered a severe bear market, such as from 1929 to 1939. Jones employs forecasts of future performance, so that this feature would be of no use in Jones. For this reason, as well as the reasons set forth above in connection with claim 1, claim 19 is allowable over the prior art of record.

Claims 20 and 21 are allowable for the reasons that claim 1 is allowable.

It is respectfully submitted that all of the pending claims are in condition for allowance. Early reconsideration and allowance of the claims are respectfully requested.

Respectfully submitted,

Date: December 23, 2002



Robert E. Rosenthal  
Registration No. 33,450  
Attorney for Applicant

DUANE MORRIS LLP  
One Liberty Place  
Philadelphia, PA 19103-7396  
(215) 979-1000



## MARKED COPY OF AMENDED CLAIMS

1.(amended) A method for evaluating financial plans, comprising the steps of:

receiving from a user financial plan information, comprising a predetermined initial value of an investment, at least one predetermined contribution amount at a predetermined contribution time, and at least one predetermined withdrawal amount at a predetermined withdrawal time subsequent to the predetermined contribution time, and a plan duration;

selecting a first historical commencement date for a simulation of performance of a financial plan consistent with said financial plan information;

using historical financial market data commencing from said first historical commencement date, calculating the ~~change~~changes in said predetermined initial value of an investment over a time interval based on changes in value over a first historical time interval to obtain a ~~changed~~ investment value;

~~updating the changed investment value based on selected investment assumptions to obtain a further changed investment value; and~~

~~calculating the change in the further changed investment value over a second time interval based on changes over a second historical time interval to obtain a further investment value, and~~

~~repeating said steps of calculating, updating and again calculating with respect to a third historical time interval and a fourth historical time interval, respectively; and~~

~~after at least one of the calculations, adjusting the investment value based on at least one of said for each time period in one or more series of successive historical time periods, said step of calculating including allowing for said predetermined contribution amount and said predetermined withdrawal amount, continuing until an expiration of the plan duration; and~~

selecting a plurality of second historical commencement dates and repeating the foregoing steps of calculation commencing with each of said second historical commencement dates.

7. (amended) A system for evaluating financial plans, comprising:

means for receiving from a user financial plan information comprising a predetermined initial value of an investment, at least one predetermined contribution amount at a predetermined contribution time, and at least one predetermined withdrawal amount at a predetermined withdrawal time subsequent to the predetermined contribution time, and a plan duration;

RECEIVED

JAN 07 2003

GROUP 3600

means for selecting a first historical commencement date for a simulation of performance of a financial plan consistent with said financial plan information;

means for using historical financial market data commencing from said first historical commencement date, calculating the ~~change~~changes in said predetermined initial value of an investment over a time interval based on changes in value over a first historical time interval to obtain a changed investment value;

means for updating the changed investment value based on selected investment assumptions to obtain a further changed investment value;

means for calculating the change in the further changed investment value over a second time interval based on changes over a second historical time interval to obtain a further investment value, and

means for further calculating, updating and again calculating with respect to a third historical time interval and a fourth historical time interval, respectively; and means for after at least one of the calculations, adjusting the investment value based on at least one of a contribution amount and a withdrawal amount for each time period in one or more series of successive historical time periods, said step of calculating including allowing for said predetermined contribution amount and said predetermined withdrawal amount, continuing until an expiration of the plan duration; and

means for selecting a plurality of second historical commencement dates and repeating the foregoing steps of calculation commencing with each of said second historical commencement dates.

13. (amended) A storage medium having stored therein a plurality of instructions, wherein the plurality of instructions, when executed by a processor, cause the processor to perform the steps of:

receiving from a user financial plan information, comprising a predetermined initial value of an investment, at least one predetermined contribution amount at a predetermined contribution time, and at least one predetermined withdrawal amount at a predetermined withdrawal time subsequent to the predetermined contribution time, and a plan duration;

selecting a first historical commencement date for a simulation of performance of a financial plan consistent with said financial plan information;

using historical financial market data commencing from said first historical commencement date, calculating the ~~change~~changes in said predetermined initial value of an investment over a time interval based on changes in value over a first historical time interval to obtain a changed investment value; for each time period in one or more series of successive historical time periods, said step of calculating including allowing for said predetermined

contribution amount and said predetermined withdrawal amount, continuing until an expiration of the plan duration; and

~~\_\_\_\_\_ updating the changed investment value based on selected investment assumptions to obtain a further changed investment value; and~~

~~\_\_\_\_\_ calculating the change in the further changed investment value over a second time interval based on changes over a second historical time interval to obtain a further investment value, and~~

~~\_\_\_\_\_ repeating said steps of calculating, updating and again calculating with respect to a third historical time interval and a fourth historical time interval, respectively; and~~  
~~\_\_\_\_\_ after at least one of the calculations, adjusting the investment value based on at least one of a contribution amount and a withdrawal amount.~~  
selecting a plurality of second historical commencement dates and repeating the foregoing steps of calculation commencing with each of said second historical commencement dates.